

PCT

REC'D 16 FEB 2005

WIPO

PCT



INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference BPCL 9905	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB 03/03573	International filing date (day/month/year) 14.08.2003	Priority date (day/month/year) 29.08.2002
International Patent Classification (IPC) or both national classification and IPC C08F10/00		
Applicant BP CHEMICALS LIMITED et al.		

1. This International preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
- These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and Industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 12.03.2004	Date of completion of this report 15.02.2005
Name and mailing address of the International preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Balmer, J-P Telephone No. +49 89 2399-8520 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/GB 03/03573**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-21 as originally filed

Claims, Numbers

1-18 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/GB 03/03573**

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	1-13
	No: Claims	14-18
Inventive step (IS)	Yes: Claims	
	No: Claims	1-18
Industrial applicability (IA)	Yes: Claims	1-18
	No: Claims	

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB 03/03573

Ad section V

1. Reference is made to the following documents:
D1: US-B-6 184 1701
D2: WO-A-97/27224
D3: KAMFJORD, THOR ET AL: "Supported metallocene catalysts prepared by impregnation of MAO-modified silica by a metallocene /monomer solution" MACROMOLECULAR RAPID COMMUNICATIONS (1998), 19(10), 505-509, XP002222295
D4: RYTTER, ERLING ET AL: "Supported metallocene catalysts prepared by impregnation of silica with metallocene / aluminoxane /1- hexene solutions" MACROMOLECULAR RAPID COMMUNICATIONS (2001), 22(17), 1427-1431, XP001113454
2. The method for the preparation of a supported polymerisation catalyst system as disclosed in present claims 1-13 is not known from the cited prior art. Accordingly present claims 1-13 are novel over the prior art with regard to Article 33(2) PCT.
3. The documents D1 and D2 disclose the preparation of supported metallocene catalyst systems comprising the impregnation onto a support of a solution prepared by contacting a metallocene precatalyst with a cocatalyst in presence of a promoter which an olefinic unsaturated compound (i.e. styrene or olefin). This in order to increase the activity of the catalyst for the polymerisation of olefins.
4. The documents D3 and D4 disclose the preparation of similar catalyst systems as in D1 and D2 wherein after the impregnation of the catalyst system onto the support the monomer is allowed to prepolymerized slowly.
5. The present invention claims a novel catalyst preparation method in order to obtain a catalyst with an improved storage stability, an improved activity over a longer polymerisation time (see p.3;l.24-27).
The effect of the present invention is shown with respect to the stability of the catalyst's activity and activity during the polymerisation and this only for a metallocene system. Nothing is mentioned about storage stability (contrary to D3 and D4).
The applicant has not shown that the present catalyst preparation method results in an

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB 03/03573

improved system compared to the cited prior art.

Therefore the examining division considers that this method is only an simple alternative of D1-D4 not showing any additional surprising effect and therefore not involving an inventive step over the prior art with regard to Article 33(3) PCT.

6. Further for the same reason as mentioned in point 5. above, the examining division considers the final product obtained according to present claim 1-13 is identical to the one disclosed in D1 and D2 (or even D3 and D4, because prepolymerisation is not excluded from present claim 14-18).

Therefore present claims 14-18 are not novel over the cited prior art with regard to Article 33(2) PCT.

7. Industrial applicability is acknowledged (Article 33(4) PCT).

Box No. VIII (iii) DECLARATION: ENTITLEMENT TO CLAIM PRIORITY

The declaration must conform to the standardized wording provided for in Section 213; see Notes to Boxes Nos. VIII, VIII (i) to (v) (in general) and the specific Notes to Box No. VIII (iii). If this Box is not used, this sheet should not be included in the request.

Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application specified below, where the applicant is not the applicant who filed the earlier application or where the applicant's name has changed since the filing of the earlier application (Rules 4.17(iii) and 51 bis.1(a)(iii)):

In relation to this International Application, BP CHEMICALS LIMITED is entitled to claim priority of the earlier European Application No. 02358021.0 dated 29th August 2002 by virtue of the following:

An Agreement between BP LAVERA S.N.C. (employers of the inventors JACOBSEN, Grant Berent and MASTROIANNI, Sergio) and BP CHEMICALS LIMITED (employers of the inventors KIMBERLEY, Brian Stephen and TAYLOR, Michael John) dated 1st January 2002

This declaration is made for the purposes of all designations.

☐ This declaration is continued on the following sheet, "Continuation of Box No. VIII (iii)".

Box No. VIII (iv) DECLARATION: INVENTORSHIP (only for the purposes of the designation of the United States of America)
The declaration must conform to the following standardized wording provided for in Section 214; see Notes to Boxes Nos. VIII, VIII (i) to (v) (in general) and the specific Notes to Box No. VIII (iv). If this Box is not used, this sheet should not be included in the request.

**Declaration of inventorship (Rules 4.17(iv) and 51bis.1(a)(iv))
 for the purposes of the designation of the United States of America:**

I hereby declare that I believe I am the original, first and sole (if only one inventor is listed below) or joint (if more than one inventor is listed below) inventor of the subject matter which is claimed and for which a patent is sought.

This declaration is directed to the international application of which it forms a part (if filing declaration with application).

This declaration is directed to international application No. PCT/..... (if furnishing declaration pursuant to Rule 26ter).

I hereby declare that my residence, mailing address, and citizenship are as stated next to my name.

I hereby state that I have reviewed and understand the contents of the above-identified international application, including the claims of said application. I have identified in the request of said application, in compliance with PCT Rule 4.10, any claim to foreign priority, and I have identified below, under the heading "Prior Applications," by application number, country or Member of the World Trade Organization, day, month and year of filing, any application for a patent or inventor's certificate filed in a country other than the United States of America, including any PCT international application designating at least one country other than the United States of America, having a filing date before that of the application on which foreign priority is claimed.

Prior Applications:

I hereby acknowledge the duty to disclose information that is known by me to be material to patentability as defined by 37 C.F.R. § 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the PCT international filing date of the continuation-in-part application.

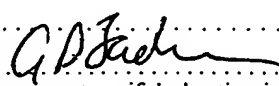
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Name: JACOBSEN, Grant Berent

Residence: Bouc-Bel-Air, France
 (city and either US state, if applicable, or country)

Mailing Address: 343 Chemin du Petit Nice, 13320 Bouc-Bel-Air, France

Citizenship: British

Inventor's Signature: 
 (if not contained in the request, or if declaration is corrected or added under Rule 26ter after the filing of the international application. The signature must be that of the inventor, not that of the agent)

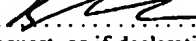
Date: 2/9/03
 (of signature which is not contained in the request, or of the declaration that is corrected or added under Rule 26ter after the filing of the international application)

Name: KIMBERLEY, Brian Stephen

Residence: Bouche Du Rhone, France
 (city and either US state, if applicable, or country)

Mailing Address: 1116 Rue Camille Saint Saens, Bouc-Bel-Air, 13320 Bouche Du Rhone, France

Citizenship: British

Inventor's Signature: 
 (if not contained in the request, or if declaration is corrected or added under Rule 26ter after the filing of the international application. The signature must be that of the inventor, not that of the agent)

Date: 2/9/03
 (of signature which is not contained in the request, or of the declaration that is corrected or added under Rule 26ter after the filing of the international application)

☒ This declaration is continued on the following sheet, "Continuation of Box No. VIII (iv)".

Continuation of Box No. VIII (i) to (v) DECLARATION

If the space is insufficient in any of Boxes Nos. VIII (i) to (v) to furnish all the information, including in the case where more than two inventors are to be named in Box No. VIII (iv), in such case, write "Continuation of Box No. VIII ..." (indicate the item number of the Box) and furnish the information in the same manner as required for the purposes of the Box in which the space was insufficient. If additional space is needed in respect of two or more declarations, a separate continuation box must be used for each such declaration. If this Box is not used, this sheet should not be included in the request.

Continuation of Box No. VIII

Name: MASTROIANNI, Sergio

Residence: Martigues, France

Mailing Address: 33 Avenue des Esperelles, Appartement 203, 13500 Martigues, France

Citizenship: French

Inventor's Signature: 

Date: 02/09/2003

Name: TAYLOR, Michael John

Residence: Sunbury-on-Thames, Middlesex, United Kingdom

Mailing Address: 85 Maryland Way, Sunbury-on-Thames, Middlesex, TW16 6HP, United Kingdom

Citizenship: British

Inventor's Signature: _____

Date: _____

Continuation of Box No. VIII (i) to (v) DECLARATION

If the space is insufficient in any of Boxes Nos. VIII (i) to (v) to furnish all the information, including in the case where more than two inventors are to be named in Box No. VIII (iv), in such case, write "Continuation of Box No. VIII ..." (indicate the item number of the Box) and furnish the information in the same manner as required for the purposes of the Box in which the space was insufficient. If additional space is needed in respect of two or more declarations, a separate continuation box must be used for each such declaration. If this Box is not used, this sheet should not be included in the request.

Continuation of Box No. VIII

Name: MASTROIANNI, Sergio

Residence: Martigues, France

Mailing Address: 33 Avenue des Esperelles, Appartement 203, 13500 Martigues, France

Citizenship: French

Inventor's Signature:----- Date:-----

Name: TAYLOR, Michael John

Residence: Sunbury-on-Thames, Middlesex, United Kingdom

Mailing Address: 85 Maryland Way, Sunbury-on-Thames, Middlesex, TW16 6HP, United Kingdom

Citizenship: British

Inventor's Signature: ----- Date: 29/9/03-----